Claims

1. A peptide, a fragment or derivative thereof, which sensitizes cells for apoptosis, comprising an amino acid sequence selected from the group of SEQ ID NOS:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132.

2. A peptide according to claim 1, wherein the peptide is linked to a second moiety which mediates the uptake into a cell.

3. A peptide according to claim 1 or 2, wherein the second moiety is a carrier.

4. A nucleic acid coding for a peptide as defined in claim 1.

5. A recombinant DNA comprising at least one nucleic acid coding for a peptide as defined in claim 1, operably linked to regulatory control nucleic acid sequences which can affect expression of said nucleic acid sequences in a host cell.

6. An expression vector or plasmid comprising the recombinant DNA as defined in claim 5.

7. A host cell comprising the expression vector of claim 8.

8. The host cell according to claim 7, wherein the host cell is a eukaryotic or prokaryotic cell.

9. A method of producing a peptide or an immunogenic fragment thereof, encoded by the recombinant DNA according to claim 5, which process comprises (i) culturing a host cell in a culture medium suitable for the expression of said proteins or immunogenic fragments thereof, and (ii) recovering said recombinant proteins or immunogenic fragments thereof from said host cell or said culture medium.

10. An antibody that immunospecifically binds to a peptide according as defined in claim 1.

11. A peptide of claims 1 to 3 and/or a nucleic acid of claim 4 and/or a recombinant DNA of claim 5 and/or a vector of claim 6 for use as a pharmaceutical.

12. The use of at least one peptide of claims 1 to 3 and/or a nucleic acid of claim 4 and/or a recombinant DNA of claim 5 and/or a vector of claim 6, optionally in combination with at least one active compound for the manufacture of a medicament which sensitizes a cell for apoptosis.

13. The use according to claim 12, wherein the sensitization for apoptosis occurs by binding of IAPs.

14. The use according to claim 13, wherein the IAP is livin-ß.

15. The use according to any of claims 12 to 14, wherein the cell which is sensitized for apoptosis is a cancer cell.

16. The use according to claim 15, wherein the cancer cell is selected from the group consisting of neuroblastoma, intestine carcinoma preferably rectum carcinoma, colon carcinoma, familiary adenomatous polyposis carcinoma and hereditary non-polyposis colorectal cancer, esophageal carcinoma, labial carcinoma, larynx carcinoma, hypopharynx carcinoma, tong carcinoma, salivary gland carcinoma, gastric carcinoma, adenocarcinoma, medullary thyroidea carcinoma, papillary thyroidea carcinoma, renal carcinoma, kidney parenchym carcinoma, ovarian carcinoma, cervix carcinoma, uterine

corpus carcinoma, endometrium carcinoma, chorion carcinoma, pancreatic carcinoma, prostate carcinoma, testis carcinoma, breast carcinoma, urinary carcinoma, melanoma, brain tumors preferably glioblastoma, astrocytoma, meningioma, medulloblastoma and peripheral neuroectodermal tumors, Hodgkin lymphoma, non-Hodgkin lymphoma, Burkitt lymphoma, acute lymphatic leukemia (ALL), chronic lymphatic leukemia (CLL), acute myeolid leukemia (AML), chronic myeloid leukemia (CML), adult T-cell leukemia lymphoma, hepatocellular carcinoma, gall bladder carcinoma, bronchial carcinoma, small cell lung carcinoma, non-small cell lung carcinoma, multiple myeloma, basalioma, teratoma, retinoblastoma, choroidea melanoma, seminoma, rhabdomyosarcoma, craniopharyngeoma, osteosarcoma, chondrosarcoma, myosarcoma, liposarcoma, fibrosarcoma, Ewing sarcoma and plasmocytoma.

17. The use according to claim 15 or 16, wherein the cancer is melanoma.

18. A medicament for the treatment of cancer, comprising a peptide of claims 1 to 3 and/or a nucleic acid of claim 4 and/or a recombinant DNA of claim 5 and/or a vector of claim 6, respectively, and a pharmaceutically acceptable carrier, optionally in combination with an active compound.

19. A medicament according to claim 18, wherein the active compound is selected from the group consisting of (i) antimetabolites; (ii) DNA-fragmenting agents; (iii) DNA-crosslinking agents; (iv) intercalating agents; (v) protein synthesis inhibitors; (vi) topoisomerase I poisons; (vii) topoisomerase II poisons; (viii) microtubule-directed agents; (ix) kinase inhibitors; (x) miscellaneous investigational agents; (xi) hormones and (xii) hormone antagonists.

20. A diagnostic kit for the detection of IAPs, preferably livin-ß, in cancer cells, comprising at least one peptide as defined in claim 1.

21. A diagnostic kit for the detection of IAPs, preferably livin-ß, preferably in cancer cells, comprising at least one nucleic acid of claim 4, and/or a vector of claim 6, and/or a host cell of claims 7 or 8.